

The
DISCOVERY
OF
MODERN
ANAESTHESIA

— BY —
Dr L. H. Kevins,
— 1894 —

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THE
Discovery
OF
Modern Anæsthesia

BY WHOM WAS IT MADE?

A BRIEF STATEMENT OF FACTS

BY DR. LAIRD W. NEVIUS
SPECIALIST

*In the Administration of Nitrous Oxide Gas for Minor
Surgery and the Painless Extraction of Teeth,*

~~Cooper Institute, New York~~

Chicago.

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GEORGE W. NEVIUS
COOPER INSTITUTE, NEW YORK

1894

TO
DR. G. Q. COLTON,

MY FORMER
ASSOCIATE IN PRACTICE,
AND WHO IN HIS EARLIER YEARS DEVOTED SO MUCH TIME
AND ENERGY TO THE INTRODUCTION AND
DEVELOPMENT OF
NITROUS OXIDE GAS,
AND TO WHOM THE WRITER IS INDEBTED FOR MUCH
VALUABLE INFORMATION. THE AUTHOR,
WITH THE LOVE AND AFFECTION
A GRATEFUL SON
FEELS TOWARDS A KIND, LOVING AND CHRISTIAN
FATHER,
DEDICATES THIS LITTLE VOLUME.



“Th’ invention all admir’d, and each, how he
To be th’ inventor miss’d, so easie it seem’d
Once found, which yet unfound most would have thought
Impossible.”



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PREFACE.

In an effort to obtain a true history of the discovery of modern anæsthesia, and to whom the honor of having made the discovery belongs (there having been four claimants), I was surprised in not being able to find all the facts, dates, etc., clearly set forth in any one publication. Neither could I find in any work heretofore published upon the subject more than one portrait, and that was invariably the portrait of the one claimant in whose interest the claimant himself, or some personal friend, had written the book or pamphlet. In this work I have, regardless of time and expense, endeavored to briefly compile in one small volume undeniable facts and figures, showing when and where each of the four noted men were born, where they received their professional education, when and where and by what means, or under what circumstances, each of the four aspirants per-

formed their first operations upon the basis of which they claimed the honor of being the original discoverer ; and to give the reader a correct account of the place and date of death, and under what peculiar circumstances they met their death,—one having committed suicide ; another leaving his sick bed in a state of wild excitement and dying a few hours later in Central Park, New York ; a third, becoming deranged, dying in an asylum, and the fourth being stricken with paralysis while visiting a patient. Also to place before the reader correct portraits of the most noted men connected with the subject, and engravings of the monuments that have been erected to their memory, or to commemorate the discovery of anæsthesia.

I do not claim that I have discovered anything new bearing upon the subject, but I do claim that this is the first and only impartial, unprejudiced and fully illustrated publication in which are given all the circumstances, dates, and facts as mentioned above.

I have endeavored to make this story not only of great interest and value to physicians and dentists, but also a very interesting

historical tale, in which a patient might easily become interested, and thus not only pass away their waiting moments in an office pleasantly, but with profit to themselves as well. It contains nothing objectionable for patients to read, or that can in any way prejudice them against an anæsthetic. In fact, it might be read with interest and profit by everybody. As no history, or even a brief account, of the discovery and introduction of anæsthesia can be written at this late date without repeating or quoting the words of other writers, I do not deem it necessary to note by quotation marks the fact that I have here and there appropriated the words of others.

It is hoped that all who read this will read it in the spirit in which it has been written, viz.: "With charity for all; with malice toward none."

L. W. NEVIUS.

New York,

February, 1894.



THE DISCOVERY OF MODERN ANÆSTHESIA.

In social circles, and in the quietude of a million of homes, the people will for years to come consider and discuss the panorama of the World's Columbian Fair. Their thoughts will wander back with happy memories of the "White City" upon the shores of Lake Michigan. More and more, as the years roll by, and simultaneously with a retrospect of the wonders of the great Fair, will come this thought :

Whence came this Fair? By whom was it suggested? How was it brought about?

To the above questions no one can give the true solution. It will always remain shrouded in mystery.

Many a person, no doubt, is justly entitled to be called the father, or originator, of the Columbian Celebration. Many persons have claimed the honor ; but to whom does it belong?

So we may say in regard to the discovery of modern anæsthesia.

Whence came this great boon to a suffering world? By whom was it discovered? Through what, or by what, instrumentalities was it introduced and developed?

To these questions we can only give a partial answer, and leave the subject still in doubt.

WHAT IS ANÆSTHESIA?*

A state of profound sleep and unconsciousness to sensations of physical pain. The agent used to produce this condition is known as an anæsthetic. The method of administering is by inhalation.

Chloroform, Ether, and Nitrous Oxide Gas (Laughing Gas), were known to chemistry, and

*The word anæsthesia was coined by Oliver Wendell Holmes.

In a letter to Dr. Morton, dated Boston, Nov. 21st, 1846, Mr. Holmes says: "Everybody wants to have a hand in the great discovery. All I will do is to give you a hint or two as to names, or the name, to be applied to the state produced, and to the agent.

The state should, I think, be called anæsthesia. * * * * *

The adjective will be anæsthetic. Thus we might say, the "state of anæsthesia," or the "anæsthetic state."

in common use, long before their anæsthetic properties were known. I believe there are but few people (speaking of the masses) who are aware of the fact that there are many living to-day who had operations performed upon their bodies before anæsthesia was discovered, and but few, comparatively speaking, who fully realize the importance of this great discovery.

It has been admitted by all civilized peoples that to America belongs the honor of making the discovery ; but when we attempt to designate the individual author, America herself has not yet been able to fully decide to whom the honor belongs.

There are four claimants—Crawford W. Long, and Charles T. Jackson, physicians ; Horace Wells and William T. G. Morton, dentists—all of whom are now dead.

There are, however, a number of persons still living who assisted in the first operations that were performed when the discovery of modern anæsthesia was made. Dr. G. Q. Colton, who administered gas to Dr. Wells, when he—Wells—made the discovery of the anæsthetic effects of nitrous oxide gas, and with

whom the writer has had the honor of being associated in practice, is still living and active in his practice.

The writer also had the honor of extracting a tooth, but a short time previous to the publication of this pamphlet, for Dr. E. E. Marcy, a very distinguished physician, who suggested to Dr. Wells the use of ether, and who assisted him in a number of his first operations and experiments with gas and ether. Dr. Marcy is a highly honored and respected physician of New York City, now retired from practice.

While compiling the facts and figures herein contained, the writer received from Dr. F. T. Wilhite, of Anderson, S. C., a beautiful "In Memoriam" of his father, Dr. P. A. Wilhite, who, from all accounts, was the first person to place another profoundly under the influence of an anæsthetic, and who was a medical student of Dr. Long's about the time the latter performed his first operations with ether.

His death occurred at Anderson, S. C., as late as June 25th, 1892, in the 71st year of his age.

Also a letter from Dr. J. F. Groves, who was one of Dr. Long's former students spoken

of in connection with his first operations with ether inhalations. The letter which we here publish by permission, explains itself :

“ COHUTTA, Ga., Dec. 7th, 1893.

DR. L. W. NEVIUS,

Cooper Institute, New York.

Dear Doctor : Your letter of the 29th of Nov. is to hand, and would have been answered sooner, but that I was absent from home, attending a reunion of the Alumni of the Medical College of Georgia.

Strange coincidence ! On the day you wrote your letter inquiring if I was a student under Dr. C. W. Long, and what I knew of his discovery, the President of the Alumni Association called on me to give the Association all the facts I could in regard to Dr. Long's experiments and operations with ether as an anæsthetic.

I was a pupil of Dr. Long's, entering his office about May, 1844, and remaining until Oct., 1845.

I was not present to see Dr. Long's operations in 1842.

On entering his office in 1844, I found him much enthused over the idea that he had discovered an agent which would enable him to perform surgical operations without pain. This agent was the inhalation of sulphuric ether.

I soon imbibed his enthusiasm, and proposed to be his subject for etherization, that I might have a personal knowledge of its effects, which I found rather pleasant than otherwise.

Dr. Long stated to me that he first conceived the idea of the anæsthetic effects from the inhalation of sulphuric ether by its use as an exhilarant by the young men of his village. While under its influence, he observed that they would strike the walls and other objects with tremendous force, never seeming to experience the least pain. From this simple fact, under God, he was led to the discovery of anæsthesia, that greatest boon to suffering humanity.

During the years of his experiments Dr. Long lived in Jefferson, Jackson Co., Ga., an obscure country town, where few cases of surgery presented themselves. Being a careful and unassuming man, he was thus slow in put-

ting his discovery before the public, wishing it to be thoroughly proved in his own mind. I have in my possession a copy of his first written and published account of his discovery, which I will send you.

Yours truly,

J. F. GROVES, M. D."

The author has also had the honor of meeting very recently the widow of the late William T. G. Morton, to whom he is indebted for the portrait of her husband, and for much valuable information in regard to the active part he took in the discovery and introduction of modern anæsthesia.

The author is also greatly indebted to Miss Eve B. Simpson, of Edinburgh, Scotland, for the very excellent portrait of her father, Sir James Y. Simpson, and for a photograph of the bust of her father, taken by her from the original bust, which she herself owns. In a letter to the writer of this little history, dated Edinburgh, Jan. 23d, 1894, Miss Simpson says: "The enclosed photograph I did of his bust in the National Gallery here, which is the best of him I know; better than the one at

Westminster and done about 1850, or even earlier."

In regard to the author of this little work using the above mentioned pictures as illustrations and the placing of her father's portrait among the group of distinguished men comprising the large historical picture entitled *SOUVENIR OF THE DISCOVERY OF ANÆSTHESIA*, Miss Simpson closes her letter in the following beautiful and generous words :

"I would much like to see the combination picture you speak of in your letter, and pleased to see my father amongst those whose names are associated, like his, with a struggle to conquer pain ; pleased to see him alongside his American brethren, in unity, shoulder to shoulder."

Not until the author began to investigate as to who was the discoverer of modern anæsthesia, did he have any idea of the amount of energy each aspirant had spent in fighting for his own claim, or to what an extent and bitter ending this warfare had been carried, and what a difference of opinion existed as to who was the real discoverer, or whether or not the honor did not belong to two or more persons.

The author has not been able to find an impartial or unprejudiced statement of the facts bearing upon this important subject; Long and his friends claiming the honor for Long; Wells and his friends for Wells; Morton for Morton, and Jackson for Jackson.

The writer not having had the honor of an acquaintance with any one of these distinguished gentlemen, and the discussions in the medical journals, the public press and in Congress having been carried on before his professional days began, he proposes giving a very brief and impartial statement of facts and figures, showing when, where, and by whom, the first painless operations were performed, and allow the reader to form his own conclusions (if he has not already done so) as to who was the discoverer, or, if more than one, to what degree of merit each of the actors are justly entitled.

The first person ever thoroughly anæsthetized (of which we have any account) was a colored boy, and the anæsthetic used was ether. It occurred in the year 1839, and as follows:

As early as the year 1832, the boys and girls

in a neighborhood of Athens, Georgia, were in the habit of using ether at their social gatherings, winding up the evening's sport with an ether frolic. This means of amusement continued for several years without any serious results.

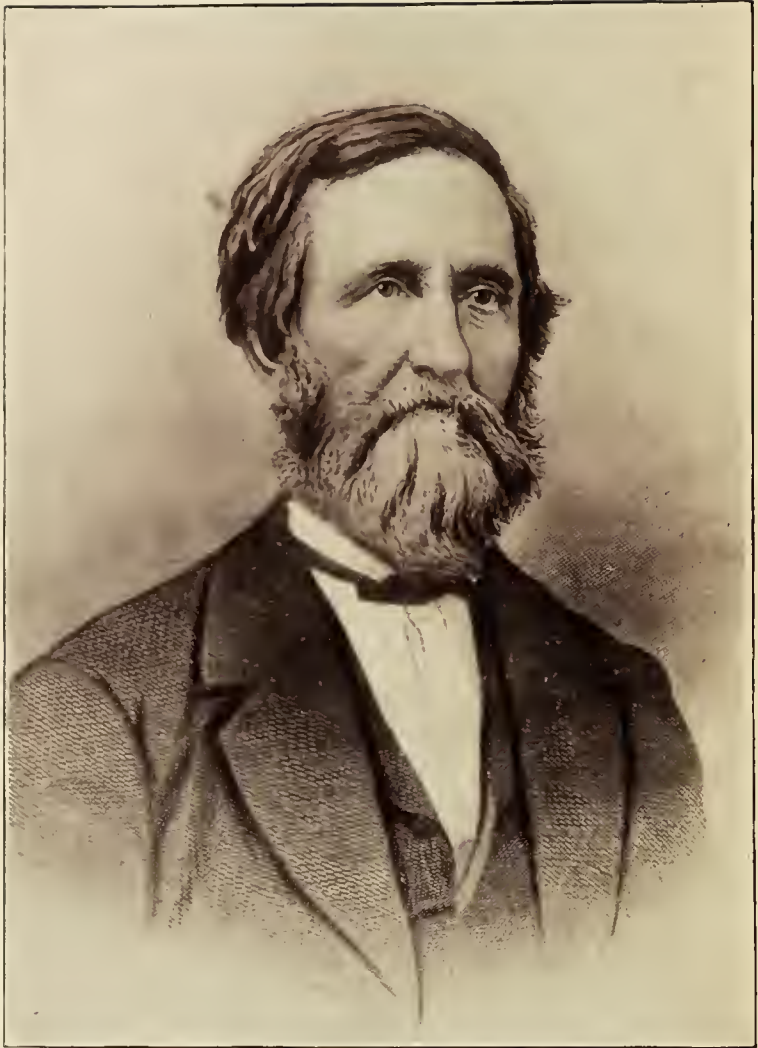
It was in the fall of 1839, that a number of boys and girls met at a Mr. Ware's, about five miles from Athens, to attend a quilting. When the hour for the usual frolic came, all the boys and girls inhaled ether. Some would cry, some laugh, some dance, and others show fight. After the effects of the ether had passed off, and all were quiet again, a young man by the name of Wilhite noticed a negro boy at the door, who seemed to be enjoying the sport. Young Wilhite invited him to inhale ether. He refused. A number of the young men then insisted upon his taking it. He refused again, in a most positive manner, whereupon some of these thoughtless boys, ignorant of the danger that might result from the administration of ether, caught hold of the negro boy and called Wilhite to give him the ether. The boy struggled violently, but they threw him down and held

him while Wilhite poured out some ether upon a handkerchief and pressed it firmly over his mouth and nose. He fought furiously, but the boys persisted, thinking it to be great fun. After a long struggle the colored boy became quiet and unresisting. The young men relinquished their hold upon him, and were greatly surprised that he did not get up immediately and say or do something foolish for them to laugh at. He lay quiet, with stertorous breathing; they tried to arouse him, but could not. They then became alarmed, and sent one of their number on horseback for a Dr. Sydney Reese, at Athens. The messenger rode with all possible speed. He was fortunate in finding Dr. Reese in his office, and the doctor lost no time in going to Mr. Ware's. On his arrival he found the negro lying upon the floor, still soundly asleep. The principals in the affair, fearing they might have committed a murder, were so alarmed that they contemplated making their escape from the penalty of the law; but the timely arrival of Dr. Reese, soon restored their courage. The young ladies had left the scene before the doctor arrived.

After hearing the history of the case, Dr. Reese began to restore the sleeping negro boy to consciousness by throwing water in his face, shaking and pricking him, until he awoke, greatly to the relief of all present. It was more than an hour from the time the messenger started for the doctor until he returned with him to Mr. Ware's home, as the distance to Athens and return was ten miles. During all this time the colored boy was soundly anæsthetized.

Before leaving Mr. Ware's, Dr. Reese gave the boys a lecture on the dangers of such frolics, and cautioned them against a repetition of their heedless acts. This broke up the ether frolics in that neighborhood.

The first person operated upon without pain, while under the influence of an anæsthetic (of which we have a record) was a Mr. Venable, and the physician who performed the operation was Dr. Crawford W. Long. It occurred as will be related further on.



DR. CRAWFORD W. LONG.

CRAWFORD W. LONG.

Dr. C. W. Long was born in Danielsville, Madison Co., Georgia, on the 3d of Nov., 1816. He was first graduated from the University of Georgia, in 1835. He then began the study of medicine, and in 1839 was graduated from the Medical Department of the University of Pennsylvania. He first began the practice of medicine at Jefferson, Jackson Co., Ga.

Dr. Long lived and practiced in a neighborhood where it was a thing of common occurrence to use ether at social gatherings and it was while attending one of these socials that he got the idea of using ether as an anæsthetic, just as it will be observed further on Dr. Wells got his first ideas of the anæsthetic effects of nitrous oxide gas, two years later, viz. : by noticing that persons while under the exhilarating influence of ether in the one case and nitrous oxide, in the other, were badly injured and yet were unconscious of the fact. These obser-

vations led both Long and Wells to try the experiment upon themselves. Upon several occasions Dr. Long became furiously excited and could not be controlled. On recovering from the ether intoxications, he frequently noticed that his arms and hands were badly bruised, and yet he was not conscious of having been hurt. He often noticed that his students were bruised by falls and blows, and yet they were unconscious of having received any injury.

These facts repeatedly observed, suggested to the mind of Dr. Long the use of ether in surgical operations. He finally decided to give it a trial.

Dr. Long performed his first operation upon a Mr. J. M. Venable, March 30th, 1842, removing a small glandular tumor from his neck. This, as stated before was the first operation ever performed upon a patient while under the influence of an anæsthetic.

Dr. Long's second operation was performed June 6th, 1842, when he removed another small tumor from the neck of Mr. Venable.

In a certificate sworn to by J. M. Venable,

some time after the two operations were performed, he testified that both operations were endured without pain.

Dr. Long's third operation was July 3d, 1842, in the amputation of a toe for a negro boy belonging to Mrs. Hemphill, of Jackson, Ga.

Sept. 9th, 1843, Dr. Long performed his fourth operation, removing a tumor from the head of Mary Vincent, also of Jackson, Ga.

It so happened that in the year 1844, P. A. Wilhite—the young man who put the colored boy so profoundly to sleep under the influence of sulphuric ether at the quilting party at Mr. Ware's, in 1839—became a medical student of Dr. Long's. Young Wilhite soon learned of Dr. Long's discovery and use of etherization in minor operations, and one day while in conversation with the doctor upon the subject of anæsthesia, related to him his own experience with ether, in the case of the negro boy. Dr. Long had never heard of the colored boy episode and had never before thought it possible to keep a person under the influence of ether so long a time. This information of Wilhite's gave him new aspirations and new

courage, and he decided to try his new discovery in a more prolonged operation than those he had already performed, but his opportunities were very limited.

His only patient requiring the use of ether in 1845 was on January 8th, in the amputation of a finger for a negro boy belonging to Ralph Bailey, of Jackson, Ga.

While Dr. Long—in his little obscure country practice—was waiting for a favorable opportunity to fully demonstrate the effects and safety of sulphuric ether in capital operations, Dr. Wells, of Hartford, Conn., discovered nitrous oxide gas to be an anæsthetic, under the influence of which he himself had had a large molar tooth extracted without pain, and had himself performed the same operation for a number of others, and Dr. Morton, of Boston, Mass., discovered—without any knowledge of Dr. Long's previous discovery and use of ether in surgical operations—and had published to the world that sulphuric ether was an anæsthetic, under the influence of which capital surgical operations could be performed with safety, and without pain to the patient.

It was Dr. Long's misfortune to be living and practicing in a little country town, one hundred and thirty miles from a railroad.

He did not enjoy the advantages of a city practice. His operations had all been of a minor character. There were no hospitals where he could test his discovery in capital operations; no medical societies he could report to; no medical journal published within hundreds of miles; not even a daily paper, only a weekly, and that with only a limited local circulation; but his operations were the subject of town talk, and became well known in the small sphere in which he moved and practiced. How marked the contrast between the advantages of Dr. Long and those of the other three claimants.

The author is indebted to Dr. J. F. Groves, of Cohutta, Ga., for a copy of the Southern Medical and Surgical Journal, published forty-five years ago, and is the old book Dr. Groves refers to as having sent to the author.

In the December number for 1849 appears the first published account of Dr. Long's discovery and first operations, under the following head-lines:

"An account of the first use of Sulphuric ether by Inhalation as an Anæsthetic in Surgical Operations. By C. W. Long, M. D., of Jefferson, Jackson Co., Georgia." We will here give only a few extracts from Dr. Long's article.

* * * * "The first I saw of the use of ether, or rather of Dr. Morton's 'letheon,' as an anæsthetic, was in the editorial of the Medical Examiner for Dec., 1846, in which the editor gives the following extract from a paper by Dr. H. J. Bigelow, contained in the Boston Journal: Having on several occasions used ether, since March, 1842, to prevent pain in surgical operations, immediately after reading this notice of 'letheon,' I commenced a communication to the editor of the Medical Examiner, for publication in that Journal, to notify the medical profession that sulphuric ether, when inhaled would of itself render surgical operations painless, and that it had then been used by me for that purpose for more than four years. I was interrupted when I had written but a few lines, and was prevented, by a very laborious country practice, from resuming my communication, until the Medical Examiner for January,

1847, was received, which reached me a few days after reading the December number.

* * * * On reading these articles, I determined to wait a few months before publishing an account of my discovery, and see whether any surgeon would present a claim to having used ether by inhalation in surgical operations prior to the time it was used by me. A controversy soon ensued between Messrs. Jackson, Morton and Wells, in regard to who was entitled to the honor of being the discoverer of the anæsthetic powers of ether, and a considerable time elapsed before I was able to ascertain the exact period when their first operations were performed. Ascertaining this fact, through negligence I have permitted a much longer time to elapse than I designed, or than my professional friends with whom I consulted advised ; but as no account has been published (so far as I have been able to ascertain) of the inhalation of ether being used to prevent pain in surgical operations as early as March, 1842, my friends think I would be doing myself injustice not to notify my brethren of the medical profession of my priority of the use of ether

THE DISCOVERY OF MODERN ANÆSTHESIA.

by inhalation in surgical operations. * * * *
Having so long neglected presenting my claim to the discovery of the anæsthetic powers of ether, for the purpose of satisfying the minds of all of its justness, I have procured, I conceive, a sufficient number of certificates to establish my claim indisputably." The doctor then presents the certificates of several persons for whom he had operated. The first one given was from James M. Venable, of Cobb county, Ga., dated "July 23d, 1849, and sworn to before Alfred Manes, J. P." Several others are given in like order. "The question will no doubt occur, why did I not publish the results of my experiments in etherization soon after they were made? I was anxious, before making my publication, to try etherization in a sufficient number of cases to fully satisfy my mind that anæsthesia was produced by the ether, and not the effect of the imagination, or owing to any peculiar insusceptibility to pain in the persons experimented on. At the time I was experimenting with ether, there were physicians high in authority, and of justly distinguished character, who were the advocates of *mesmer-*

ism, and recommended the induction of the *mesmeric state* as adequate to prevent pain in surgical operations. * * * * Surgical operations are not of frequent occurrence in a country practice, and especially in the practice of a young physician ; yet I was fortunate enough to meet with two cases in which I could satisfactorily test the anæsthetic powers of ether. * * * * After fully satisfying myself of the powers of ether to produce anæsthesia, I was desirous of administering it in a severer surgical operation than any I had performed. * * * * Had I been engaged in the practice of my profession in a city, where surgical operations are performed daily, the discovery would, no doubt, have been confided to others, who would have assisted in the experiments ; but occupying a different position, I acted differently, whether justifiable or not.

* * * * “ While cautiously experimenting with ether, as cases occurred, with the view of fully testing its powers, and its applicability to severe as well as minor surgical operations, others, more favorably situated, engaged in similar experiments, and consequently the publication

of etherization did not 'bide my time.' This being the case I leave it with an enlightened medical profession, to say whether or not my claim to the discovery of anæsthesia is forfeited by not being presented earlier, and with the decision which may be made I shall be content."

Dr. Long died June 16th, 1878, in the 62nd year of his age.

In commenting on Dr. Long's article, the editor of the Journal says : " A few months ago Dr. Long informed us of his early attempts at etherization in surgery. He was then informed that any claim set up at this late day to priority of discovery would be severely criticised, if not violently resisted ; and that he had best, therefore, do all he could to fortify his position. He has accordingly sent us a number of certificates, properly attested ; but as it is unusual for medical journals to admit these, and as besides, in our profession, the word of a gentleman is sufficient on all points of controversy, these are of course omitted here. We state, however, they may be seen by any one curious in the matter, and their

CRAWFORD W. LONG.

character may be judged of by the two following, bearing most pointedly on the subject under discussion. We have only to add, that the writer of this communication is a highly worthy member of the medical profession, exceedingly modest in his pretensions and entitled to full credit for all he advances."





DR. HORACE WELLS.

HORACE WELLS.

Dr. Horace Wells was born in Hartford, Windsor County, Vermont, Jan. 21, 1815. He was the eldest of three children. Soon after the birth of Horace, his father bought a valuable farm at Westminster, Vt., where the early days of young Wells were spent. Wells' parents were intelligent, and, for that day and neighborhood, were considered wealthy. They gave their son every advantage for moral and mental culture. During the year 1834, young Wells began the study of dentistry at Boston. The College of Dentistry was not then established, but Wells acquired the best professional education possible at that time, and after completing his studies opened an office in Hartford, Conn. He early manifested great mechanical talent, and constructed and patented several machines. His ingenuity led him to invent and construct most of his dental instruments.

In August, 1840, L. P. Brockett, of Brooklyn, New York, then a medical student at Hartford, went to Dr. Wells to have a large molar tooth extracted. The operation was so difficult and so painful that Dr. Wells said there ought to be some method of mitigating such suffering.

The first operation ever performed without pain by the use of nitrous oxide gas (of which we have any record) was performed upon Dr. Horace Wells, and occurred as related below.

On the 10th of Dec., 1844, Dr. G. Q. Colton delivered a lecture in Hartford, taking for his subject nitrous oxide gas. In order to demonstrate to his audience the amusing effects of "laughing gas," (as it was then called) Dr. Colton invited a number of those present to come upon the platform to inhale the gas. Among those who inhaled it was Dr. Wells and a young man by the name of Cooley. Cooley, while under its influence, ran against some benches which were upon the stage, bruising his legs badly. After the effects of the gas had passed off, Dr. Wells asked young Cooley if he had not hurt himself. Cooley said "No." Dr. Wells replied, "you must

have been hurt, for you struck your legs against the benches." Young Cooley pulled up his trousers, and was greatly surprised to find the blood running down his legs. He assured Dr. Wells he did not realize that he had wounded himself.

Dr. Wells then said to a friend near by, and who had been an eye witness to all that had happened, "I believe a person, by inhaling a sufficient quantity of that gas, could have a tooth extracted, or a leg amputated, and not feel pain." On their way home from the lecture that evening, Dr. Wells told his wife that he was so thoroughly convinced of the fact that a tooth could be extracted without pain while under the influence of laughing gas, that he was going to take the gas the following day and have a tooth extracted.

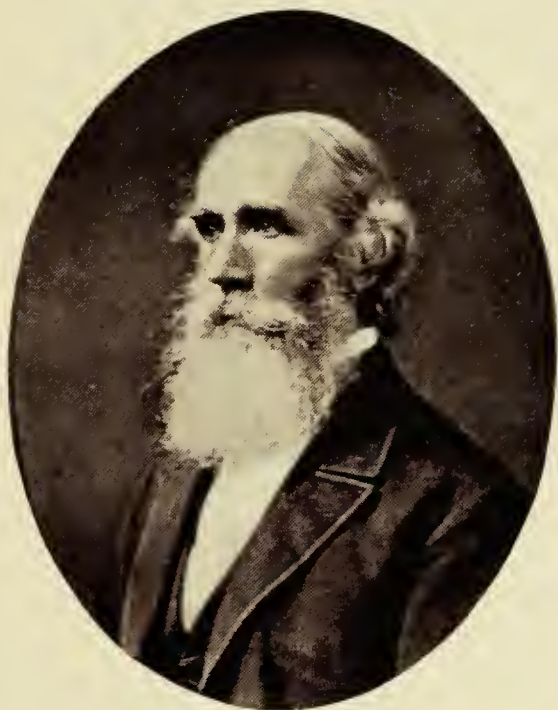
Upon arriving home and before retiring, he went to see his friend and former student, Dr. Riggs, who was a neighboring dentist, to tell him of his intention to take the gas and have a troublesome tooth extracted the following morning.

Dr. Riggs tried to dissuade him from taking

the gas. Wells' mind was made up. He determined to test the anæsthetic effects of the gas upon his own person. Early next morning, Dec. 11, 1844, Dr. Wells called upon Dr. Colton and engaged him to go to his office at 10 o'clock A.M. and give him the gas. He also called upon Dr. Riggs, and requested him to be present to extract the tooth and be a witness to the operation. At the appointed hour all were at Wells' office. Dr. Wells seated himself in his own operating chair and Dr. Colton proceeded to administer the gas. At the proper moment Riggs extracted a large upper molar tooth.

Dr. Wells showed no evidence of having suffered any pain. He remained unconscious for a few moments, and on coming to he exclaimed, "A new era in tooth pulling! It did not hurt me as much as the prick of a pin; it is the greatest discovery ever made."

This painless operation, performed upon his own person, proved to Dr. Wells beyond all doubt that nitrous oxide gas was an anæsthetic agent, and that operations could be performed without pain under its influence. He at once constructed an apparatus for its manu-



DR. JOHN M. RIGGS.



facture, and introduced the use of gas in his dental practice, extracting teeth daily without pain. Dr. E. E. Marcy, then a noted physician of Hartford, informed Wells that when a student at Amherst College, he, with other students, had often inhaled nitrous oxide gas, and also the vapor of sulphuric ether, for their own amusement. He said the effects produced by the two were identical, and he suggested to Wells to try ether as a substitute for gas. Dr. Wells, after a few trials, said he found it more difficult to administer the vapor of sulphuric ether, and for that reason, and because of its unpleasant after effects, he resolved to adhere to gas alone.

About a month after Dr. Wells' first operation with gas, Dr. Marcy administered ether to a sailor for the extirpation of a small wen. The patient felt no pain, and the operation was a success. These operations by Drs. Wells and Marcy were performed more than two years after Dr. Long's operations; but both Wells and Marcy were ignorant of Long's discovery, simply because of the fact that Long had not published accounts of his operations in the medical journals.

The discovery of anæsthesia by Wells was entirely original with him, as it was with Long, who preceded him two years and more.

Dr. Wells, after using the gas successfully for some time, felt that the benefits of his discovery were of great importance, and should be laid more broadly before the medical and dental professions, and the world in general, and early in 1845 he visited Boston for that purpose. He called on a number of the leading physicians and dentists of the city—among them Dr. Morton, his former partner—and after laboring for three weeks, trying to establish the use of nitrous oxide gas as an anæsthetic, and meeting with no success, he became greatly discouraged and returned to Hartford, where he resumed the practice of dentistry.

Dr. Wells continued the use of gas successfully for about two years, as he afterwards proved by the depositions of over forty of Hartford's best citizens, for whom he had operated; but he found it impossible to introduce its use in general surgery, owing, no doubt, to the fact that anæsthesia was a new factor in surgery, and physicians and dentists in those

THE DISCOVERY OF MODERN ANÆSTHESIA.

days were ignorant of its physiological effects, and believed that any agent powerful enough to produce a sleep so profound as to permit the extraction of a tooth, or the amputation of a limb, without the patient's knowing it or suffering any pain, was a sleep so near the "sleep that knows no waking," that the thought of death was associated with that of using any anæsthetic, and, no one felt safe in administering it at that early day in its development.

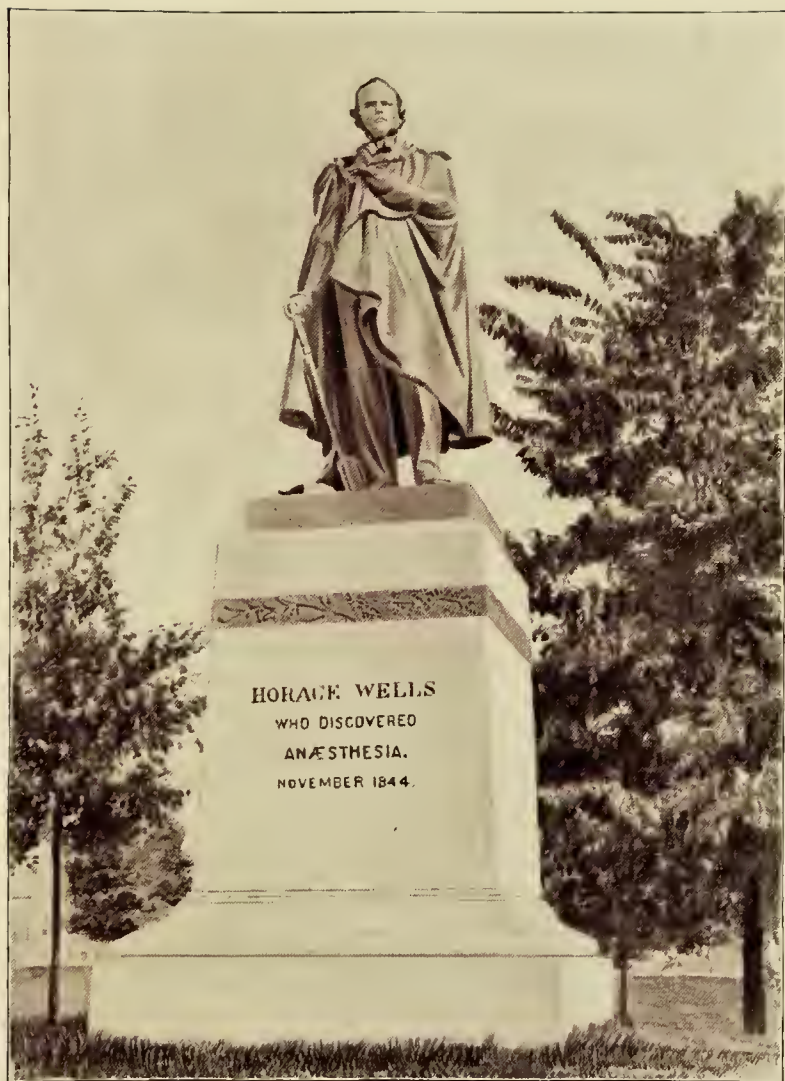
On January 12, 1848, just twelve days after the death of Dr. Wells, the Paris Medical Society, still ignorant of the fact of his death, voted "that to Dr. Horace Wells, of Hartford, Conn., United States of America, is due all the honor of having first discovered and successfully applied the use of vapors or gases whereby surgical operations could be performed without pain," and also elected him an honorary member of their society. In 1847, the General Assembly of Connecticut passed resolutions in favor of Dr. Wells as the discoverer of modern anæsthesia; resolutions to the same effect were passed by the Court of Common Council, of the city of Hartford. All the physicians, surgeons

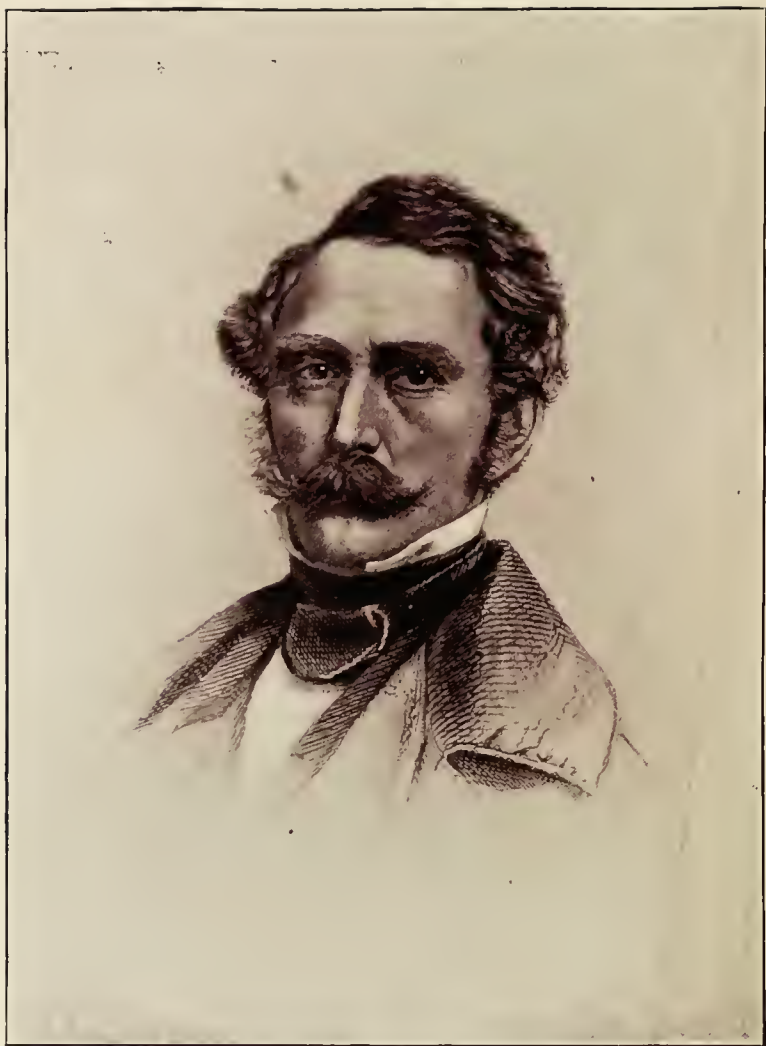
HORACE WELLS.

and dentists of the city of Hartford united in a testimonial that it was their belief that to Dr. Horace Wells belonged the honor of having discovered anæsthesia. On Bushnell Park, in Hartford, there stands a monument erected by the State of Connecticut and the city of Hartford, upon which is a portrait statue of Dr. Wells and the following inscription :

HORACE WELLS
WHO DISCOVERED
ANÆSTHESIA
NOVEMBER, 1844.

The reader in forming his conclusions as to whom the honor belongs, must not lose sight of the fact that these honors were conferred upon Dr. Wells by personal friends, as was the case in conferring similar honors upon the other claimants.





DR. WM. T. G. MORTON.

WILLIAM T. G. MORTON.

Dr. W. T. G. Morton was born in Charlton, Worcester Co., Mass., Aug. 19, 1819. He left home when quite a young man to engage in business in Boston, but was unsuccessful, and in 1840 went to Baltimore and there began the study of dentistry. In 1841 he returned to Boston and entered the dental office of Dr. Horace Wells as a student and assistant. In 1842 he became a partner of Dr. Wells, and introduced a new kind of solder of his own invention, whereby artificial teeth could be soldered to gold plates. In 1843, for reasons not given, the co-partnership between Drs. Wells and Morton was dissolved, and Dr. Wells opened an office in Hartford, where the year following—1844—he made his discovery of the anæsthetic effects of nitrous oxide gas, as has been previously stated. Dr. Morton being desirous of obtaining a medical degree, had in March, 1844, entered his name

as a medical student in the office of Dr. C. T. Jackson, (formerly spoken of as one of the four claimants) and the following fall matriculated in the Harvard Medical School, but was never graduated from that institution. After Wells' discovery of anæsthesia by the inhalation of "laughing gas," Dec. 11, 1844, Morton became familiar with the facts connected with Wells' discovery and his successful use of gas, and they frequently had interviews upon the subject; sometimes in Boston and sometimes in Hartford. Dr. Morton was not then sufficiently acquainted with chemistry to know how to make the nitrous oxide gas, and knowing Dr. Jackson to be a scientific chemist, he called upon him and asked for information. Dr. Jackson informed him that the manufacture of nitrous oxide gas required some nicety of manipulation; that there was danger of generating nitric, instead of nitrous oxide, and that he was too busy to make the gas for him; at the same time asking Dr. Morton what he wanted the gas for. Dr. Morton told him that he wished to use it to render patients insensible to pain while having their teeth extracted.

⁷ Dr. Jackson suggested to Morton the use of sulphuric ether, (just as Dr. Marcy suggested the use of sulphuric ether to Dr. Wells two years before) saying it would produce the same effects, was safe to use, easily procured, and did not require any apparatus. He also told him that the students at Cambridge College often inhaled ether for amusement. That same evening, Sept. 30, 1846, Dr. Morton administered ether to a patient named Eben Frost. On recovering from the effects of the ether Mr. Frost said he had no knowledge of when the tooth was extracted, and consequently felt no pain. This, from all accounts, was Dr. Morton's first operation with an anæsthetic, and it reminded him very forcibly of Dr. Wells' experience with nitrous oxide gas. But he (Morton) had just extracted a tooth without pain, not by the use of "laughing gas," but, as he thought, a new agent. That night was a sleepless one to Dr. Morton. His mind was filled with the possibilities of the future. The following day he visited the office of R. E. Eddy, a patent lawyer, to whom he stated his case and asked his

professional opinion and aid in obtaining letters patent upon his supposed discovery.

Upon minute inquiry into the matter, Mr. Eddy ascertained that Dr. Jackson was most intimately connected with the subject. Mr. Eddy came to the conclusion that Dr. Jackson had upon scientific principles suggested the use of ether, and Dr. Morton had demonstrated the anæsthetic effects of the agent he wished to patent.

Mr. Eddy asked for further time to consider the matter. In the meantime he saw Dr. Jackson, who confirmed all that Morton had said, to wit., that he (Jackson) had participated in the affair in the manner stated. Mr. Eddy's final conclusion was, that the patent could not safely be issued to either one independently of the other. Dr. Jackson objected to having his name connected with a patent right, fearing that he might expose himself to the censure of the Massachusetts Medical Society, and might even be expelled. Dr. Jackson, in order to give Dr. Morton the benefit of the patent, (if there could be any derived from it) consented to have the application for

the patent made out in the names of both, with the understanding that he was to assign over to Morton at once all his right, title and interest, and that the patent should be issued in Dr. Morton's name, Dr. Morton agreeing to give him 10 per cent. of all he made out of it.

Mr. Eddy having drawn up the papers according to Jackson's wishes, Dr. Jackson signed and delivered the assignment, and both Jackson and Morton signed the specifications, and swore to them. Mr. Eddy being a Justice of the Peace, administered the oath himself, and certified to it as follows :

“ STATE OF MASSACHUSETTS, }
County of Suffolk. } ss.

On this 27th day of Oct., A. D. 1846, personally appeared before me, Charles T. Jackson and Wm. T. G. Morton, *and made oath that they do verily believe themselves to be the original and first inventors of the improvement* hereinbefore discovered, and that they do not know or believe the same to have ever before been known or used, and they are citizens of the United States of America.

R. H. EDDY,
Justice of the Peace.”

In the meantime, and before the patent was granted, Dr. Morton determined to bring his discovery to the attention of the medical profession, and accordingly called upon Dr. Warren, who was one of the surgeons in the Massachusetts General Hospital. Dr. Warren promised his co-operation, and soon sent him an invitation to make a practical test of his invention in the hospital. The day appointed for the first public trial was Oct. 16, 1846. The clinic-room was well filled with students and leading physicians of Boston. The operation performed by Dr. Warren was the removal of a small vascular tumor situated on the left side of the neck of a young man about twenty-five years of age, Dr. Morton having first placed him under the influence of "letheon," which was the name Morton had given to the fluid he called his own invention. All present were impressed with the great degree of success which had attended the experiment, but Dr. Warren very naturally declared that further trials would be required to settle its value. These followed in rapid succession, the next trial being had the following day, when a woman

had a tumor removed from her shoulder by Dr. Hayward. This second operation was also entirely successful. On Nov. 7, these noted surgeons of the General Hospital made what they considered a crucial test of the anæsthetic in capital operations. This consisted of an amputation above the knee by Dr. Hayward, and the excision of the lower jaw by Dr. Warren ; the amputation being entirely painless and the suffering incident to excision being greatly mitigated. The seal of success was thereby placed upon the discovery. Up to this time it was not fully known by the hospital surgeons what the agent used was, and they declined the further use of the preparation until informed by Dr. Morton what it consisted of.

Notwithstanding Dr. Morton had tried to disguise the odor of the ether he used by aromatic oils, had given it the name of letheon, and had applied for a patent, he publicly announced to the surgeons of the hospital that the substance he used was sulphuric ether. But unfortunately for his fame and good name, he made an effort to control the use of ether as an anæsthetic in his own interest by means of let-

ters patent, which were granted to him Nov. 12, 1846, and numbered 4848. December 21, 1846, an English patent was obtained, it being issued in Morton's interest to an English citizen, who subsequently surrendered it to Morton's possession through assignment.

The writer believing there are a great many physicians and dentists of to-day who are not familiar with the fact that there ever was a patent granted to any person for the discovery of the novel effects produced by ether, or the anæsthetic effects produced by ether, will here quote a few paragraphs from the report of the commissioner of patents, showing in part upon what grounds the patent was granted, The report appears under the caption of "*Alleviation of pain during surgical operations.*"

He says * * * * "The process is one of exceeding simplicity, being merely the inhalation of the vapor of sulphuric ether, to prepare the patient for a painful surgical operation." (The author would have said, to prepare the patient for what would otherwise be a painful surgical operation). "It has been known for many years that the vapor of sulphuric ether, when

freely inhaled, would intoxicate to the same extent as alcohol when taken into the stomach; and that while the effects of the latter were lasting and hazardous when carried to stupification, the former was temporary in its power over the system, and usually left no uncomfortable feeling after the first effects had subsided. It has also long been the practice of surgeons to administer opiates previous to severe operations, the materials employed varying according to circumstances—in some instances, opium; in others, alcohol in some form; these two being most generally adopted. It is possible that in such cases some rash hand may have carried the effects of these drugs even to the extent of subversion of sense, but such has never been admissible or reasonable practice; the dose given, on the contrary, operating only to the extent of a palliative. The fact has stood forth upon the pages of science for many years, that the inhalation of sulphuric ether was productive of temporary narcotic stimulant effects, and it was also known that the excessive use of this stimulant had, on some few occasions, been followed by alarming symptoms. But not-

withstanding this familiar record in the possession of every surgeon, it was never attempted to substitute this for the palliatives in common use previous to surgical operations, nor was it known to what extent it rendered the system insensible to pain. * * * * In view of the above and other considerations, a patent has been granted for this discovery. Much has been said for and against the introduction of this discovery, but the weight of authentic statements is decidedly in its favor. The testimony of individuals or bodies of men is rarely necessary prior to the granting of a patent, and but seldom regarded, the question of *novelty* being that usually entertained ; but as this patent has been granted upon proof of *novelty*," etc., etc.

In closing his report upon this patent, the commissioner quotes from an article, or testimonial, published in the Boston Medical and Surgical Journal, by Dr. A. L. Pierson, a distinguished surgeon of Salem, Mass., as follows:

" The last and most important of its effects is, that it either partially or wholly annuls pain or destroys the consciousness of it, so that it is not remembered ; and thus the sentiment of fear is

wholly obliterated. The patient appears to have been dreaming, and in the second case said that he 'was in a distinct existence,' *i. e.*, distinct from his former experience, thus illustrating the theory of double consciousness.

There are recommendations enough to insure it a fair trial among the humane and enlightened members of our profession, and for their decision we must wait and by it be governed in its future use. Drs. Morton and Jackson at least are entitled to the hearty thanks of the profession for their discovery, and the liberal manner in which they have offered it to all the subjects of surgical operations both in and out of the hospital. If some hunter up of obsolete theories should prove that such a thing had before been thought of or tried, still these gentlemen are entitled to the credit of having made it for the first time perfectly available to the suffering, and submitted it to the test of those competent to decide on its merits, without being content to rest its pretensions on non-professional credulity or popular notoriety."

After the issuing of these patents, Dr. Mor-

ton began selling office rights, as was the custom in those days with all patents.

The medical profession was outspoken in its opposition to patents as antagonistic to professional growth and subversive of the general good ; but Dr. Morton was not a recognized member of the medical profession, and therefore was not in honor bound to an observance of both the letter and spirit of its code of ethics.

The patent was opposed and infringed upon. Litigations followed and the Government failed to recognize the validity of the patent issued by itself, and ether came into general use in this country and in Europe, without compensation to the discoverer. In 1849, the Washington University, Baltimore, conferred upon Dr. Morton the honorary degree of M.D.

In recognition of his beneficent discovery, Dr. Morton was invested by Russia with the Order of Saint Vladimir ; and by Sweden with the Order of Vasa.

A silver box was presented to Dr. Morton, early in the history of modern anæsthesia, with the following inscription engraved on the front of it :

“ Testimonial in honor of the ether discovery of September 30, 1846.”

Upon the lid were these words : “ This box, containing one thousand dollars, is presented to William Thomas Green Morton by the Members of the Board of Trustees of the Massachusetts General Hospital, and other citizens of Boston, May 8, 1848.” Under the above in quotations, are these words : “ He has become poor in a cause which has made the world his debtor.”

In 1850, Drs. Morton and Jackson each received from the French Academy a Montyon Prize, valued at twenty-five hundred francs each, awarded to “ Benefactors of the Human Race.” Erected in Mount Auburn Cemetery, Boston, Mass., is a beautiful monument with the following appropriate inscriptions :

“ W. T. G. MORTON,
BORN AUG. 9, 1819,
DIED JULY 15, 1868.

“ Inventor and revealer of anæsthetic inhalation, before whom in all time surgery was agony ; by whom pain in surgery was averted and annulled ; since whom science has control of pain. Erected by citizens of Boston.”





MORTON MONUMENT.



DR. CHARLES T. JACKSON.

CHARLES THOMAS JACKSON.

Dr. C. T. Jackson was born in Plymouth, Mass., June 21, 1805. He began his eventful career by making a geological and mineralogical survey of Nova Scotia, in company with Francis Alger, an account of which he published in 1827, being but 21 years of age.

He was graduated at the Harvard medical college in 1829.

Shortly after graduating in medicine in this country, Dr. Jackson went to Europe and pursued medical and scientific studies in Paris, where he met many distinguished men. In 1831 he visited Vienna, and during the prevalence of the cholera of that year, assisted in dissecting the bodies of two hundred victims of that dread disease. While in Paris, he experimented with electricity and magnetism. In 1834, Dr. Jackson constructed, successfully worked, and exhibited to his friends, a telegraphic apparatus similar to the model that

was patented a year later by Mr. Morse, priority over which was always claimed by Dr. Jackson.

. Having returned to America, he began the practice of medicine in Boston. In 1835 he opened a laboratory for instruction in analytical chemistry, which was the first of its kind in the United States. In 1836 he was appointed State geologist of Maine and spent three years in the execution of this work, of which he published three annual accounts. In 1838 he was appointed State geologist for Rhode Island. He also spent three years in making a geological survey of New Hampshire. About this time he drew up a plan for the geological survey of New York, which was adopted. In 1844 he explored the southern shores of Lake Superior, and was the first man to call attention to the mineral resources of that country.

In 1845 he opened up copper mines and also discovered iron mines in the Lake Superior regions. In 1847 he was appointed by Congress to survey the mineral lands of Michigan. In 1846-7 Dr. Jackson became very

much interested in the subject and discovery of anæsthesia, as has been previously mentioned in connection with the history of Dr. Morton.

As soon as the noted surgeons of the Massachusetts General Hospital and the physicians of Boston endorsed the use of sulphuric ether in surgical operations, Dr. Jackson, seeing Dr. Morton was becoming famous as the discoverer of modern anæsthesia, set up the claim that he himself had made the discovery years before, and that it was he who suggested to Dr. Morton the use of ether.

In a little pamphlet which he published in defence of his claim he says :

“In the year 1837, I discovered that ether vapor was superior to alcohol as a remedy for the strangling and toxical effects of chlorine gas, and it was used for that purpose in my laboratory from that time forth. In the winter of 1841-2, I was employed in giving a few lectures before the Mechanics’ Charitable Association, in Boston, and in my last lecture, which I think was in the month of February, I had occasion to show a number of experi-

ments in illustration of the theory of volcanic eruptions, and for these experiments I prepared a large quantity of chlorine gas, collecting it in gallon glass jars, over water. Just as one of these large jars was filled with pure chlorine, it overturned and broke, and in my endeavors to save the vessel I accidentally got my lungs full of chlorine gas, which nearly suffocated me, so that my life was in imminent danger. The next morning my throat was severely inflamed and very painful, and I perceived a distinct flavor of chlorine in my breath, and my lungs were still much oppressed.

“ I determined, therefore, to make a more thorough trial of ether vapor. * * * * I had a large supply of perfectly pure washed sulphuric ether (oxyd of ethyle). * * * * Soaking my towel in ether, I placed it over my mouth and nose, so as to allow me to inhale the ether vapor mingled with air, and began to inhale the ether into my lungs.” He then describes the effects of the ether as follows :

“ Irritability ceased ; a sense of coolness, followed by warmth ; giddiness and exhilaration ; numbness ; swimming sensation, as if afloat in

the air ; soon fell into a dreamy state, and then became unconscious of all surrounding things. When I awoke, the pain in my throat was gone, my limbs were benumbed and nerves of sensation paralyzed ; and it was some time before I fully recovered and the pain in my throat returned. Reflecting on this phenomena, the idea flashed into my mind that I had made the discovery I had for so long a time been in quest of—a means of rendering the nerves of sensation temporarily insensible, so as to admit of the performance of a surgical operation on an individual without his suffering pain.”

This claim, coming as it did from one who had up to that time never mentioned to any one that he had discovered anything new previous to the time he and Morton claimed to have jointly discovered anæsthesia, and who at the time Morton was granted a patent upon the discovery did not have faith enough in its success to risk his reputation in connection with the patent, greatly surprised both Morton and Wells, and a violent discussion followed in the medical journals and newspapers of Boston—a discussion in which each claimant denied to the

other the originality of the discovery, claiming the honor for himself. This discussion was a very bitter, unjust and unprofessional fight, lasting for years. A fight in which or by which no one was killed by bullets, but a war of words and misspent vital energy which did not end until death, far less honorable than to die upon the battlefield, ended it. Soon after this discussion began, Dr. Wells' health failed, and he decided to go abroad to regain his health if possible, and to personally present to the surgeons of the French Institute the principles of his great discovery, and his claim to the honor of having discovered modern anæsthesia.

He met with but little encouragement abroad. The Academy of Sciences in Paris, conferred upon him the degree of M.D., but did not endorse his claim as the discoverer of anæsthesia, nor accept nitrous oxide gas as an anæsthetic. Disappointed and discouraged, he returned to America. Imagine his surprise to find that "ether" was being used and endorsed by the profession as the only reliable anæsthetic, and Morton becoming popular as its discoverer. Dr. Wells was also discouraged by his being a

man of no means, financially. The expenses of his trip abroad were paid by the purchase of pictures in Europe, which he imported and sold in the United States. Dr. Morton was more fortunate in his efforts to establish his claims than were his rivals. He had been granted a patent in his own name upon what he claimed to have been his own discovery; had been afforded the opportunity of administering his letheon (ether) to a number of patients in the Massachusetts General Hospital, for whom the noted surgeons of the hospital operated, and it was the reports of these eminent surgeons, published in the medical journals, that brought this subject prominently before the medical world, and for the time being placed Dr. Morton at the head of the list of claimants. Dr. Wells saw nitrous oxide gas supplanted by sulphuric ether, as an anæsthetic. He saw his claim as the real discoverer of anæsthesia unrecognized abroad and disputed and set aside at home. Disappointed and disheartened as he had never been before, his mind became unbalanced, and in a spell of despondency he ended his life with his own hands, in a prison

cell, in the city of New York, Jan. 24, 1848, at the age of 33.

After the death of Dr. Wells, Drs. Morton and Jackson, set up the claim that nitrous oxide gas was not an anæsthetic, and insensibility to pain could not be produced by it; and ether having been recognized by the medical profession as a reliable anæsthetic, the use of nitrous oxide gas as a narcotic was abandoned.

It now became apparent to Morton and Jackson that the honor of discovering modern anæsthesia would be given to the man who could prove priority in the administration of *sulphuric ether* for painless operations in surgery.

The bitter fight and discussions that began before the death of Wells, were continued, and Dr. Long, who previous to Wells' death had been but little heard of, now fell into line, presenting a bold and formidable claim, and the weapons that had been laid down by the late lamented Dr. Wells were again taken up by the many friends of the deceased, and the fight continued until death claimed another victim, and the lunatic asylum still another.

It will be remembered that when Dr. Morton

called upon Dr. Jackson for information in regard to making nitrous oxide gas to be used in extracting teeth, Dr. Jackson suggested the use of ether, and Morton, that same evening, September 30, 1846, gave ether to a Mr. Frost, and extracted a tooth without pain. A few days later Dr. Morton administered ether successfully for several surgical operations performed at the Massachusetts General Hospital, and about this time Morton and Jackson applied for a patent, but for certain reasons Jackson sold his interest to Morton and requested that the patent be issued to Dr. Morton. Notwithstanding Jackson's lack of interest and confidence in the success of the patent, he at the same time, with a view of future prospects and honors, sent the following communication, securely sealed, to a personal friend living in Paris, requesting him to lodge it in the archives of the Academy of Arts and Sciences, there to remain *unopened* until he should give further directions upon the subject:

“BOSTON, November 15, 1846.

“I request permission to communicate through your medium to the Academy of

Sciences a discovery which I have made, and which I believe important for the relief of suffering humanity, as well as of great value to the surgical profession.

“ Five or six years ago I noticed the peculiar state of insensibility into which the nervous system is thrown by the inhalation of the vapor of pure sulphuric ether, which I respired abundantly, first by way of experiment, and afterwards when I had a severe catarrh caused by the inhalation of chlorine gas. I have lately made a useful application of this fact by persuading a dentist of this city to administer the vapor of ether to his patients when about to undergo the operation of extraction of teeth. It was observed that persons suffered no pain in the operation, and that no inconvenience resulted from the administration of the vapor.”

Observe the forethought of Dr. Jackson in sending the above communication, with orders not to open it until his friend heard from him again. Had ether proved a failure as an anæsthetic, Dr. Jackson could have ordered the return of his communication unopened, and thus

saved himself the mortification of being in any way connected with a humbug.

As soon as it had been proved by repeated operations in the General Hospital in Boston, that sulphuric ether could be inhaled to the extent of profound anæsthesia with safety, Dr. Jackson sent a second message to his friend in Paris, which read as follows :

“ BOSTON, December 1, 1846.

“The advantage of the application of the vapor of ether has been completely established in this country, and the agent has been used with great success in the Massachusetts General Hospital,” etc., etc.

These communications Dr. Jackson intended should prove, or be used in evidence of, his priority in the discovery.

Some time after the use of ether had been established in this country, Dr. Jackson visited Europe, and personally presented his claim before the Academy of Arts and Sciences. Dr. Jackson, as stated before, was a very learned and scientific man of considerable reputation, and he succeeded in presenting his claim in such a way as to be recognized by the Paris Insti-

tute as the discoverer of modern anæsthesia. But not so in America. This action on the part of Jackson only embittered his opponents in this country and the fight continued, as has been stated before :

‘ In 1854, Dr. Morton submitted to Congress a memorial asking that that body reward him for his discovery. The subject was referred to a select committee of the House. After a thorough review of all the evidence, the committee announced the following conclusions :

“ 1st. That Dr. Horace Wells did not make any discovery of the anæsthetic properties of the vapor of sulphuric ether which he himself considered reliable and which he thought proper to give to the world ; that his experiments were confined to nitrous oxide, but did not show it to be an efficient and reliable anæsthetic agent, proper to be used in surgical operations and in obstetrical cases. * * * *

“ 2nd. That Dr. Charles T. Jackson does not appear at any time to have made any discovery in regard to ether which was not in print in Great Britain some years before.

“ 3d. That Wm. T. G. Morton in 1846, dis-

covered the facts, *before known*, that ether would prevent the pain of surgical operations, and that it might be given in sufficient quantity to effect this purpose without danger to life. He first established these facts by numerous operations on teeth, and afterwards induced the surgeons of the Massachusetts General Hospital to demonstrate its general applicability and importance in capital operations.

“4th. That Dr. Jackson appears to have had the belief that a power in ether to prevent pain in dental operations would be discovered. He advised various persons to attempt the discovery, but neither they nor he took any measures to that end, and the world remained in entire ignorance of both the power and the safety of ether until Dr. Morton made his experiments.

“5th. That the whole agency of Dr. Jackson in the matter appears to consist only in his having made certain suggestions which aided Dr. Morton to make the discovery—a discovery which had for some time been the subject of his labors and researches.”

All the surgeons and physicians of the

hospital, and several hundred members of the Massachusetts Medical society, joined in a Memorial to the Senate and House of Representatives, which read as follows :

“ To the Honorable the Senate and House of Representatives of the United States, in Congress assembled :

“ The undersigned hereby testify to your honorable bodies that in their opinion Dr. Wm. T. G. Morton *first proved* to the world that ether would produce insensibility to the pain of surgical operations, and that it could be used with safety. In their opinion his fellow-men owe a debt to him for this knowledge. Wherefore they respectfully ask a recognition by Congress of his services to his country and mankind.” * * * *

Daniel Webster, then Secretary of State, wrote a letter to Dr. Morton, dated Washington, December, 20, 1851, in which he said :

“ In reply to your letter of the 17th inst., I would say that, having been called on, on a previous occasion, to examine the question of the discovery of the application of ether in surgical operations, I then formed the opinion,

which I have since seen no reason to change, that the merit of the great discovery belonged to you, and I had supposed that the reports of the trustees of the hospital and of the committee of the House of Representatives of the United States were conclusive on this subject.

* * * * The committee of the House were, I believe, unanimous in awarding to you the merit of having made the first practical application of ether, and a majority by their report awarded to you the entire credit of the discovery."

Notwithstanding the above favorable report of the committee and petition to Congress to grant to Dr. Morton a large sum of money, no grant was made, owing to the claims of Dr. Wells, which were presented by Hon. Truman Smith, Senator from Massachusetts, the claims of Dr. Long, which were presented by Hon. Dawson, Senator from Georgia, and claims of Dr. Jackson, which were presented by Dr. Jackson and his friends, being presented in such a manner as to defeat the bill and so mystify the subject that neither Congress or any other body of men in this or any other

country, have been fully able to settle and establish the question as to who was the real discoverer of modern anæsthesia.

In the Public Garden, Boston, Mass., has been erected a beautiful monument to the honor of—they dared not say who, so it bears no man's name but that of the generous person who gave ten thousand dollars towards its erection, and the four following inscriptions:

Front side or face :

" TO COMMEMORATE THE DISCOVERY THAT THE INHALING OF ETHER CAUSES INSENSIBILITY TO PAIN, FIRST PROVEN TO THE WORLD AT THE MASSACHUSETTS GENERAL HOSPITAL IN BOSTON OCTOBER, A. D., MDCCCXLVI."

Right side :

" NEITHER SHALL THERE BE ANY MORE PAIN.
REVELATIONS."

Left side :

" THIS ALSO COMETH FORTH FROM THE LORD OF HOSTS WHICH IS WONDERFUL IN COUNSEL AND EXCELLENT IN WORKING. ISAIAH."

Rear :

" IN GRATITUDE FOR THE RELIEF OF HUMAN SUFFERING BY THE INHALING OF ETHER, A CITIZEN OF BOSTON HAS ERECTED THIS MONUMENT, A. D., MDCCCLXVII. THE GIFT OF THOMAS LEE."



ETHER MONUMENT.

PUBLIC GARDEN, BOSTON, MASS.



Dr. Morton, disappointed at not receiving an appropriation by Congress and a recognition as being the original and true discoverer, fretted himself into a state of nervous prostration, which resulted in congestion of the brain. In July, 1868, he visited New York in a wild state of excitement caused by recent publications in regard to the discovery of anæsthesia. Fatigue, anxiety and sleepless nights had exhausted his vital powers. Dr. Lewis A. Sayre and Dr. Yale were called to his bedside July 15. They considered his condition as critical, placed him in the hands of a trained nurse, ordered leeches to his temples, cups on the spine, and ice to his head. Dr. Morton would not submit to treatment. As soon as the physicians left him, he ordered his buggy to go to the Riverside Hotel, saying he knew he would soon be well if he could get out of the hot city. He drove furiously up Fifth avenue, and through Central Park. At the upper end of the Park, he leaped from his buggy, and ran to a lake near by to cool his burning brain. Persuaded to get into his buggy again, he drove a short distance, then getting out of his

buggy, he sat down upon the grass with his back against a tree. He soon became unconscious; a park policeman was called, who ordered an ambulance from St. Luke's Hospital, but Dr. Morton died before reaching the hospital.

It has been erroneously stated by different persons that, "had it not been for the interference of friends he would have drowned himself in the lake in Central Park." That he "died in St. Luke's Hospital," etc.

In a very recent interview with Mrs. Dr. W. T. G. Morton, she informed the author that she alone was with her husband when he drove up Fifth avenue and through Central Park. That the doctor drove his own horse, but at times drove at a dangerous rate of speed; but not thinking there was anything serious the matter with the doctor, she did not object to his getting out of his buggy when in the park, nor did she at once follow him as he walked away from the carriage, but later found him at the edge of the lake bathing his head.

She alone persuaded him to again get into his buggy, and at the north end of the park the doctor again alighted from his buggy, with

the results as stated above. He died July 15, 1868, at the age of 49.

In 1873 Dr. Jackson's mind, owing to the constant anxiety and worry incidental to the controversies in which he was engaged, became deranged, and after seven years of insanity he died in an asylum at Somerville, Mass., Aug. 28, 1880, at the age of 75.

How mournfully sad the last days of these noted men, who sacrificed their lives and money that those still living, and the generations to come, might be freed from pain in surgical operations by the gift of modern anæsthesia which they made to the world.

Besides various orders and decorations from the governments of France, Sweden, Turkey and Sardinia, Dr. Jackson received that of the "Red Eagle," from the King of Prussia.

Dr. Jackson's separate papers, upon various subjects, comprise very nearly one hundred titles, which he contributed to scientific journals both in the United States and Europe.

The discovery of anæsthesia in America met with the warmest and most immediate recognition in England. The first paper upon the

subject of modern anæsthesia was read before the Boston Society for Medical Improvement, by Dr. Bigelow, Nov. 9, 1846. This paper was published in the Boston Medical and Surgical Journal, Nov. 18, 1846, being the first published account of surgical anæsthesia. A copy of this journal was sent to Dr. Booth of London. As soon as Dr. Booth had read the article, he at once communicated the important intelligence to Dr. Liston, the distinguished surgeon of the University College. On the 21st of Dec., 1846, Dr. Liston practically and successfully tested the discovery, and immediately communicated the fact to a former pupil of his, Prof. Miller, of Edinburgh, in the following enthusiastic words.

“ Hurrah! rejoice! Mesmerism and its professors have met with a heavy blow and great discouragements. An American dentist has used ether (inhalation of it) to destroy pain in his operations, and the plan has succeeded.
* * * * Yesterday I amputated a thigh and removed, by evulsion, both sides of the great toe-nail, without the patient's being aware of what I was doing, so far as regards pain. The

CHARLES THOMAS JACKSON.

amputation-man heard, he says, what was said, was conscious, but felt the pain neither of the incisions nor that of tying the vessels. * * * *
I mean to use it again to-day. In six months no operation will be performed without this precious preparation. * * * * Rejoice !

Thine always, R. L."

With almost unexampled rapidity, news of the discovery spread throughout the civilized globe, and in all civilized countries the use of sulphuric ether was generally adopted in surgical operations.





BUST OF SIR JAMES Y. SIMPSON.
IN THE NATIONAL GALLERY, EDINBURGH, SCOTLAND.



SIR JAMES Y. SIMPSON.



SIR JAMES YOUNG SIMPSON.

The story of the discovery of chloroform as an anæsthetic is soon told.

Dr. J. Y. Simpson was born at Bathgate, Linlithgowshire, Scotland, June 7, 1811.

The father of Professor Simpson was a very humble baker, and his mother was one of the best and tenderest of all the women who ever bore that sacred name ; and though she died when James was but nine years old, her gentle memory lingered with him through life, while her prayers on his behalf were registered in heaven. James was sent to school when only four years of age, and his genius soon began to display itself in the easy mastery of his lessons and in a growing love for the best literature.

With an early longing for student life, James left home and entered Edinburgh University at the age of fourteen, attending the junior Greek and Humanity classes in the session of

1825-26, under Professors Dunbar and Pillans. In 1827-28 he enrolled as a student of medicine, and during the same session attended the classes of Natural Philosophy, Moral Philosophy and third Greek class. When entering on his second session he was fortunate enough to secure a bursary of the value of £10, tenable for three years.

He passed with ease and credit in the examinations for his degree, and became a member of the Royal College of Surgeons before he was nineteen years of age. As he could not take his degree as a physician until he was twenty-one, he returned for a time to Bathgate. He entered college again in 1831, and became first assistant to Dr. Gardner in dispensary work. In 1832 he received the degree of Doctor of Medicine. In 1833 he became a member of the Royal Medical Society of Edinburgh, and in 1835, together with Dr. Douglas Maclagan, and by the ever-ready liberality of his brothers, Alexander and John, he was enabled to visit the chief schools of medicine and the hospitals of England and France.

In session of 1835-36 he was elected senior

president of the Royal Medical Society. We now come to the turning point in his career. Professor Hamilton resigned the midwifery chair in the university in 1839, and Dr. Simpson was elected by a majority of one to fill his chair. In January, 1847, he received the honor of appointment as one of her Majesty's physicians for Scotland. He now began to direct his attention to the use of anæsthetics for painful operations in the practice of midwifery.

He had a very large obstetric practice, and though he used ether with much satisfaction in child-birth, he was not entirely satisfied with it, on account of its strong and disagreeable odor and very unpleasant and nauseating after effects, and he asked Professor David Waldie, the Master of the Apothecaries' Hall of Liverpool, if he, as a practical pharmacist, knew of a substance likely to be of service in producing anæsthesia.

Professor Waldie being acquainted with the composition of chloric ether, suggested that its active principle, chloroform, should be prepared from it and used.

Dr. Simpson experimented with the new agent, and upon the 4th of Nov., 1847, he discovered the anæsthetic properties of chloroform. This fact he made known to the Medical Chirurgical Society of Edinburgh, through a paper read November 10, 1847. On November 13, a public test was to have been made at the Royal Infirmary. Dr. Simpson, who was to administer the chloroform, was unavoidably absent. The operation was performed without an anæsthetic of any kind, and the patient died during the operation. The first public trial of chloroform in surgical operations was on November 15, 1847, in Edinburgh. The test proved to be a great success. Professor Dumas, the chemist who first ascertained and established the chemical composition of chloroform, was present at this test operation, and in no small degree rejoiced to witness the wonderful physiological effects of a substance with whose chemical history his own name was intimately connected.

In 1870, and but a few months previous to Dr. Simpson's death, an attempt was made, as it seems, by the surgeons of the Massachusetts

General Hospital, to rob him of his hard-won honors of being the discoverer of the anæsthetic effect produced by the inhalation of chloroform. Concerning this controversy in regard to chloroform, Dr. Simpson made the following public statement: "I know from the utmost depths of my own conscience that I never said or wrote a single word to detract from the mightiness of the discovery of anæsthesia by sulphuric ether. But surely the discovery of another anæsthetic by me a year afterward, more powerful, practical, and useful than sulphuric ether, was in itself a fact of no small moment, and tended, I well know, immensely to spread the use of anæsthesia on this side of the Atlantic."

In writing to a medical friend in India, he says: "I have sent you a short paper on ether * * * * We do not yet know who was the original suggester—Mr. Hickman, Mr. Wells, Dr. Jackson, or Dr. Morton. But it is a great thought if ever there was one." In regard to the criticisms of Dr. Bigelow, of the Massachusetts General Hospital, Dr. Simpson answers him by saying: "The history of an-

æsthesia has always taken me a full hour in my university lectures ; and in these lectures I have, year after year, paid heartily every due compliment to the most important part borne in the consummation of the practical application of anæsthesia by America, particularly by the cities of Hartford and Boston, and especially by the energy and genius of Dr. Morton."

In a second communication to Dr. Bigelow, Dr. Simpson wrote as follows : " Inoculation was an idea brought from Asia and Turkey, and acted on in England in the beginning of the last century. Ere, however, the century was closed, a new variety of matter was proposed to be inoculated by Dr. Jenner, and proved infinitely a greater success. That vaccination was thus a modification of small-pox inoculation has never been allowed to detract one iota, I believe, from the merit of the great pathological and practical revolution produced by Dr. Jenner. The two discoveries have never clashed and been entangled together, for they were in our country upwards of half a century or more separate from each other in the date of their introduction and discovery. Neither,

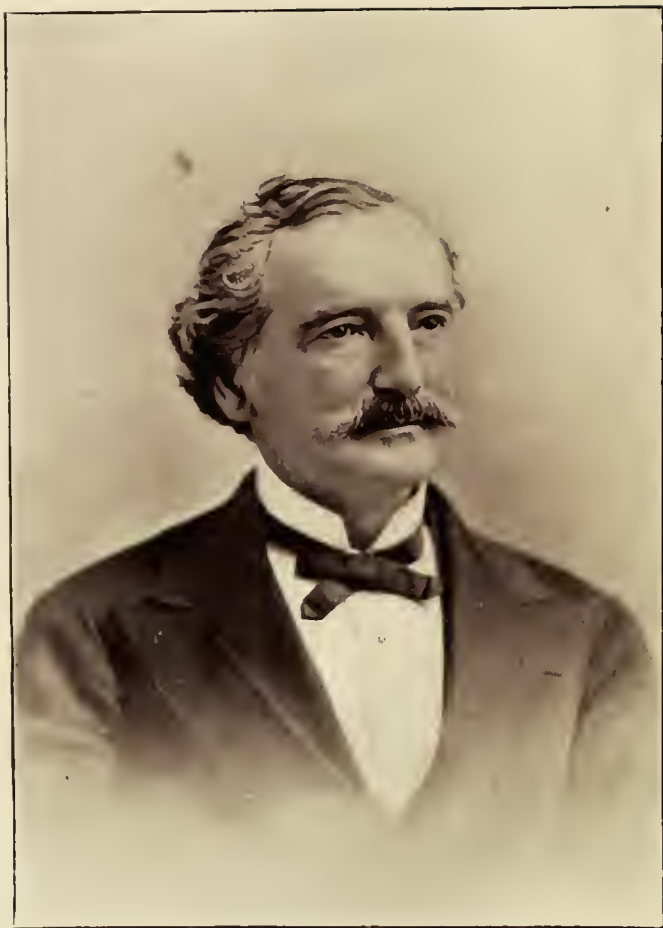
SIR JAMES YOUNG SIMPSON.

I think would the relative merits of the two anæsthetics, the American sulphuric ether and the English chloroform, have co-mixed in the manner in which they have been confused by you and others, had their discoveries been separated by upwards of half a century also."

Sir James Y. Simpson received the highest honor from his government in recognition of the great service he had rendered humanity. He died at Edinburgh, Scotland, May 6, 1870, in the fifty-ninth year of his age.

Upon the bust of Dr. Simpson at Westminster are the following words: "To whose genius and benevolence the world owes the blessings derived from the use of chloroform for the relief of suffering."





DR. GARDNER Q. COLTON.

GARDNER Q. COLTON.

HOW THE USE OF NITROUS OXIDE GAS AS AN AN-
ÆSTHETIC WAS REVIVED AND BROUGHT INTO
PRACTICAL USE FIFTEEN YEARS AFTER THE
DEATH OF HORACE WELLS.

Dr. G. Q. Colton was born Feb. 7, 1814, at Georgia, Vermont, a little town among the green hills of that State. He was the youngest of a family of eleven children. Gardner Q. received a good common school education, the best moral and religious instruction and training, together with habits of industry.

In 1843 he came to New York, and began the study of medicine with Dr. Willard Parker, who at that time was one of New York's most eminent surgeons. He soon gave up the practice of medicine and turned his attention to lecturing on chemistry and natural philosophy. It was at one of his popular lectures that Dr. Wells made his great discovery, the particulars of which have already been given. In 1847,

at Pittsburgh, Pa., he made the first application of electricity (on a small scale) to the propulsion of cars. In 1849 he went to California, and was appointed the first Justice of the Peace for San Francisco.

Returning to New York in 1851, he invested his "pile of gold" in the salt works of Syracuse, New York, and lost the whole. The salt had lost its savor.

He then resumed his lectures upon chemistry, natural philosophy, etc.

Notwithstanding Dr. Wells' discovery of the anæsthetic effects of nitrous oxide, Dr. Colton continued his lecture tours from year to year without any practical effort to use the gas as an anæsthetic, using it only as an agent to amuse and interest his audiences, often speaking of it as "laughing gas," and relating how Dr. Horace Wells had discovered its anæsthetic effects and had used it in extracting teeth without pain; but the public, remembering the fate of Wells, said it was a humbug, and no physician or dentist would attempt to use it.

While lecturing in New Haven, Conn., June, 1863, Dr. Colton invited a number of the lead-

ing professional and business men of the city to attend a private preliminary entertainment, at which he gave a full history of Dr. Well's discovery, and also gave the testimonials of a number of persons for whom Dr. Wells had extracted teeth without pain.

Dr. J. H. Smith, a distinguished dentist of New Haven, became interested in the subject, and after the meeting adjourned told Dr. Colton that he would like to try the gas in his own office, if he (Colton) would administer it. Dr. Colton, said he would be glad to do so. Residing in New Haven was a wealthy old lady, known and respected by everybody in the city. She was anxious to have some teeth extracted, but could not endure the pain of extracting without an anæsthetic, and was afraid to take ether. Dr. Smith introduced her to Dr. Colton, who persuaded her to try the "laughing gas." With great fear and nervousness she seated herself in the operating chair, and Dr. Colton, gave her the gas. While unconscious, Dr. Smith extracted seven teeth. After recovering she said "Don't go, Dr. Colton; I want to give you my blessing, and you

may mention my name to your audience at your next lecture, and state the facts," which he did. Dr. Smith was so favorably impressed with the success of the operation that he entered into an agreement with Dr. Colton, to the effect that he (Colton) should remain in New Haven for a few weeks and administer gas in his office during the day, and during his lecture in the evening mention the successful operations of the day. In three weeks and two days they extracted over three thousand teeth.

Dr. Colton was so elated over this success, and so thoroughly convinced of the fact that nitrous oxide gas was a safe anæsthetic, and that extracting teeth without pain could be made a paying business in a large city, that he abandoned the lecturing business and opened an office in New York City, devoted exclusively to the extraction of teeth without pain by the use of "laughing gas." It was called the "Colton Dental Association," because Dr. Colton's name had been so long and so prominently identified with the gas and Dr. Wells' discovery. The institution was a grand success; Colton's name and fame became world-wide.

In 1867 he visited Europe, where he was wined and dined, and the use of nitrous oxide gas successfully introduced.

Returning to America in 1868, he opened offices in Philadelphia, Boston, Baltimore, and several other cities; and thus, through his energy and success, the use of nitrous oxide gas as an anæsthetic became thoroughly established, and dentists throughout the length and breadth of the land began to use it.

The medical profession has been slow in recognizing the true value of nitrous oxide as an anæsthetic, believing it to be too transitory in its effects; but nitrous oxide gas has been used thousands of times in general surgery by many eminent surgeons, and we predict that the day is coming when nitrous oxide gas will be as generally used in surgery as it now is in dental operations.

Dr. Colton is quite a literary man, being the author or compiler of a volume entitled "Shakespeare and the Bible: Parallel Passages." Also, "Boyhood Recollections," and a small volume entitled "A few Selected Letters," compiled from letters written while

abroad. He is also the author of quite a number of tracts on theological subjects, etc.

The writer of this is indebted to Dr. Colton for many facts connected with the history of the discovery of modern anæsthesia.

To be associated with him, as the author has been, is not only a pleasure and an honor, but a benediction also. He has claimed no honor that is not due him. His name and character is known to all men and stands above reproach ; he is modest, honest, and truthful to the last degree. To know him is to believe him, and the writer does not doubt a statement, once made by him.

While compiling the facts herein contained, the author had the pleasure of being with him upon the anniversary of his 80th birthday.

Of the seven men whose portraits adorn this little volume, he is the only one left to tell the story of the advent of anæsthesia. He has been called " Blessed " by thousands upon thousands who have been relieved of pain and suffering. May he still live to relieve thousands more of the human race from "*achers*" of pain, is the prayer of his former associate.



DR. NEVIUS IN THE ACT OF ADMINISTERING NITROUS OXIDE GAS, COLTON DENTAL
ASSOCIATION, COOPER INSTITUTE, NEW YORK.

OPPOSITION TO THE INTRODUCTION OF MODERN ANÆSTHESIA.

The story of the discovery and introduction of modern anæsthesia, would not be complete if we did not give a brief account of the opposition it met with. With the present knowledge and intelligence upon the subject of anæsthesia, it hardly seems possible that the discovery of an agent or remedy, capable of, designed and intended to, relieve mankind from so much pain and suffering, should have been so bitterly opposed, and that, too, by the very same class or profession of men who labored so hard to make it what it is—one of God's greatest blessings to a suffering world. It was at Boston, Massachusetts, that the discovery of modern surgical anæsthesia was first published to the world, and it was there that it met—for a time—with the greatest opposition. Not only was it denounced by members of the medical and dental professions, but from the pulpit also. A few quotations upon this subject will suffice.

From the North British Review, 1847 : " It is useful to remind those who surrender themselves unreservedly to experiments of this nature that the vapor of ether, when combined with the air, constitutes an explosive gaseous mixture of the most dangerous kind. * * * * Now, if it be considered that the vapor-laden air inspired by a patient about to be operated upon is precisely this explosive mixture, * * * * an idea may be formed of the fate that awaits the patient if fire should unhappily reach the air which he is inhaling. A sudden explosion will communicate itself to the interior of his chest, tear the bronchi throughout their entire ramifications, and literally reduce to atoms one of the most essential of the organs of life."

By a reader of to-day, the above would be taken for sarcasm ; but the reviewer says : "For some time the profession stood abashed at this statement, and instrument makers were seized with a fit of contriving so as to avoid all such risk, protecting every accessible point with wire gauze, such as is used in the safety-lamp of Davy, constructing new valves, etc., etc. A

simple though bold experiment, however—a lighted paper held to the mouth of an etherized patient—put all fears happily at rest.”

As late as April 13, 1852, Dr. H. S. Patterson, while discussing this subject before the Philadelphia County Medical Society, of Philadelphia, said: “Our hospital—alone among great hospitals—has never permitted their [anæsthetics] employment.”

Dr. Thomas E. Bond, Professor of Special Pathology and Therapeutics in the Baltimore College of Dental Surgery, in a letter to the editor of the Boston Medical and Surgical Journal, dated December 15, 1846, said: “I protest against the whole business, because I verily believe the great discovery to be utterly useless. If it does not succeed better in Boston than it does in other places nearer to your humble servant, I would not give a farthing for it. In this part of the world it has utterly failed to do what it ought to do, and unfortunately it has done what it ought not to have done. In one case the patient did not get insensible, but got drunk, and boxed the surgeon-dentist’s jaws as his reward for ad-

ministering the intoxicating vapor. But you will say, 'The cases! the cases! Dr. Bigelow's cases! Dr. Warren's cases! the Massachusetts Hospital cases! are they not satisfactory?' No, Dr. Smith, they are not. Do you remember one Dr. Collins, whom a number of the Boston faculty sent to us some years ago armed with professional certificates, all testifying to his 'charming' powers? Pardon me; we are a little suspicious of our Boston brethren since that time. They are clever men, very clever, but—some of them—a little credulous.

* * * * The truth is, that what your correspondents are pleased to call, in medical parlance, 'producing insensibility,' is, in fact, making people 'dead drunk.' Everybody knows that when a man is in this curious condition he is very insensible to pain. A poor Irishman in this neighborhood, while in this state of 'insensibility,' had both his legs taken off by a locomotive. He manifested so little 'sensibility' that he was not aroused until a surgeon was amputating the shattered stumps, when he cried out, 'Don't be cutting me; me flesh is aisy to hale.' Can ethereal vapor beat

this exploit of whiskey? I trow not. Now, doctor, if we are to induce insensibility by this class of means, I very much prefer whiskey-punch to ether, because it is more certain and more permanent in its effects. It is less dangerous; and lastly, it will be easier to persuade patients to take it. Moreover, I have the same right to patent whiskey-punch for this purpose that Mr. Morton has to patent ether, for I do not know that such an application of the article has been made before."

Dr. James H. Bickford, in 1847, addressed a solemn warning against the use of ether, to the London Morning Chronicle, in which he denied that the insensibility which ether produces is no worse than that of drunkenness or asphyxia. He says: "There is a chemical alteration in the vital constituents of the blood; for not only is that deprived of its oxygen and of the power of coagulation—like the black, vitiated blood of malignant and putrid fever—but the corpuscles, whence fibrin is formed, are actually dissolved. Hence the blood takes a long time to regain its life-supporting, flesh-forming character, wounds show wasted edges and re-

fuse to heal, and the patient often sinks into death."

Ministers opposed the use of ether upon the ground that pain was a dispensation of Providence.

Sir James Y. Simpson found great opposition to his using ether in his obstetrical practice, Christian people basing their opposition upon the passage in Genesis, chap. iii. 16 : "Unto the woman he said, I will greatly multiply thy sorrow and thy conception : in sorrow thou shalt bring forth children."

In writing upon this subject Dr. Simpson took the position that the word "sorrow" in the passage above quoted did not necessarily involve the idea of physical suffering. He quotes from a letter written by a clergyman to a medical friend, in which anæsthesia is spoken of as "a decoy of Satan, apparently offering itself to bless women ; but in the end it will harden society and rob God of the deep, earnest cries which arise in time of trouble for help." Dr. Simpson states that "lecturers on midwifery in London and Dublin publicly adopted the same line of opposition and argument."

We find it recorded that the late Dr. Charles D. Meigs, Professor of Midwifery and the Diseases of Women and Children, in the Jefferson Medical College of Philadelphia, wrote as late as 1856 of the "doubtful nature of any process that the physicians set up to contravene the operations of those natural and physiological forces that the Divinity has ordained us to enjoy or to suffer."

How thankful poor suffering humanity must be that such superstitious ideas and objections have been swept away.

It has been said by a certain writer that, "Reliable history is never written by the generation which makes it."

Surely the generation which gave to the world modern anæsthesia did not give us a true history of its discovery, notwithstanding the long and bitter controversy in regard to its origin.

There was too much denying to one another the credit due them for the part they were instrumental in working out. Too much selfishness, each aspirant for the honor being championed by his own personal friends, because of their

being more or less connected with the part taken by their friends, or through some jealous motives between the two professions, there having been two physicians and two dentists comprising the four who claimed to have discovered anæsthesia.

The writer believes that the present generation, or the one next to come, will be sufficiently enlightened and unprejudiced to establish the facts, and award to the person or persons the proper degree of merit due to each. The author of this little volume, believes he has in his possession enough undeniable facts and evidence upon the subject to justify him in saying :

1st. That to Dr. Crawford W. Long (deceased), of Athens, Georgia, belongs the honor of having discovered in 1842, at Jackson, Georgia, that sulphuric ether was an anæsthetic, under the influence of which, when properly administered surgical operations could be and were performed by him without pain, in the above mentioned year.

2nd. That to Dr. Horace Wells (deceased), of Hartford, Conn., belongs the honor of having

discovered in 1844, at Hartford, Conn., nitrous oxide gas to be an anæsthetic, under the influence of which, when properly administered, surgical operations could be, and were, performed by him without pain in the above mentioned year.

3d. That to William T. G. Morton (deceased), of Boston, Mass., belongs the honor of first publicly demonstrating and proving to the world in 1846, at the Massachusetts General Hospital, at Boston, Mass., that sulphuric ether, when properly administered, is a comparatively safe and harmless anæsthetic, under the influence of which capital operations in surgery could be and were performed without pain, by his assistance, in the above mentioned year.

4th. That to Dr. James Y. Simpson (deceased), of Edinburgh, Scotland, belongs the honor of having discovered in 1847, at Edinburgh, Scotland, chloroform to be an anæsthetic, under the influence of which, when properly administered, prolonged surgical operations could be and were performed by him without pain, in the above mentioned year.

5th. That to Gardner Q. Colton, of Cooper

Institute, New York, belongs the honor of having revived and brought into practical use nitrous oxide gas as a safe and reliable anæsthetic, after it had been pronounced a humbug and abandoned for a period of fifteen years.

When we look back upon the history of surgery before the discovery of modern anæsthesia, and compare it with the brilliant and wonderful achievements of to-day, we must accord to those who fought out the victory over physical pain the greatest triumph of modern science. In connection with the names of Long, Wells, Morton, Jackson, Simpson, and Colton, we may justly add the name of Jenner, to whom the world owes so much for the discovery of vaccination, and to whom the British House of Commons gave thirty thousand pounds for his discovery. His experiments which finally gave to him a great name and lasting fame, were based upon a simple remark made to him by a young country woman, who, while talking to him upon the subject of small-pox, made the remark, "I cannot take the small-pox, for I have had the cow-pox."

These eminent men, whose names have been

immortalized, have all (except Dr. Colton) gained an everlasting victory over both pain and death, for they have gone to that world, of which it is written.

“ There shall be no more death, neither sorrow nor crying.”

“ Neither shall there be any more pain.”







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Nevius, L.W.

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